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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,185	02/12/2002	Shoji Ikeda	1115.66200	4415

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EXAMINER

SHEEHAN, JOHN P

ART UNIT

PAPER NUMBER

1742

DATE MAILED: 09/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/074,185

Applicant(s)

IKEDA ET AL.

Examiner

John P. Sheehan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on June 30, 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6,9 and 10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6,9 and 10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of Group I claims 1 to 6, 9 and 10 in Paper No. 6 is acknowledged. Non-elected claims 7 and 8 have been canceled without prejudice per applicants' request.

### ***Claim Objections***

2. Claims 9 and 10 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

I. Each of dependent claims 9 and 10 encompass the embodiments requiring only nitrogen or oxygen to be present in the thin film, however each of these claims depends from independent claims that require the presence of both nitrogen and oxygen. In view of this claims 9 and 10 do not further limit the claims from which they depend.

### ***Claim Rejections - 35 USC § 112, 1<sup>st</sup> Paragraph***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

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art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 9 and 10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

I. Claims 9 and 10 are considered drawn to new matter in that these claims encompass the embodiments wherein only nitrogen or only oxygen is present in the magnetic thin film, however, there is not support in the specification as filed for such embodiments. Although the Preliminary Amendment adding new claims 9 and 10 was submitted with the application including the original oath, the original oath does not refer to this Preliminary Amendment. Accordingly, new claims 9 and 10 are considered to be new matter, MPEP 608.04(b) and 608.02(h).

#### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

I. In each of claims 1 and 4, the meaning of the phrase, "whose whole content is" (claim 1, line 6 and claim 4, line 10) is not clear. If applicants are

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attempting to claim that the total content of all elements M is not less than 1 atomic% and not more than 15 atomic%, then this rejection can be overcome by deleting the phrase, "whose whole content is" and inserting in its place the phrase --wherein the total content of the M elements is--.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1 to 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over each of Japanese Patent document No. 4-163505 (Japan '505, cited on the PTO Form 892 attached to this Office action), Japanese Patent document No. 7-86036 (Japan '036, cited in the IDS submitted February 12, 2002) or Japanese Patent

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document No. 7-86035 (Japan '035, cited in the IDS submitted February 12, 2002) each in view of Callister (cited on the PTO Form 892 attached to this Office action).

Each of the Japanese patent documents teaches a magnetic thin film containing Fe, nitrogen and oxygen in proportions that overlap the proportions recited in the instant claims (see the English language abstract of each Japanese document).

Callister teaches that single crystals are difficult to grow (page 49, under the heading "3.12 Single Crystals", line 5).

The claims and the Japanese documents differ in that the Japanese documents do not teach; (1) whether the disclosed thin films are polycrystalline, (2) the exact same proportions, (3) the grain size recited in applicants' claim 2, (4) the magnetic properties recited in applicants' claim 3.

However one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious in view of Callister's teaching that single crystal materials are difficult to grow and thus appear to be the exception in crystal structure and the fact that each of the Japanese documents is silent with respect to being single crystal it would be expected that the thin films of each of the Japanese documents would be polycrystalline. Further, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the thin film compositions taught by each of the Japanese documents overlap applicants' claimed thin film composition and therefore is considered to establish a prima facie case of obviousness, In re Peterson 65 USPQ2d 1379 (CAFC 2003), In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA

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1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05. Finally, because the thin film composition taught by each of the Japanese documents has a composition that overlaps the claimed thin film composition the thin films taught by the Japanese documents would be expected to possess all the same properties as recited in the instant claims, In re Best, 195 USPQ, 430 and MPEP 2112.01.

“Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, In re Best, 195 USPQ 430, 433 (CCPA 1977). ‘When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.’ In re Spada, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best, 195 USPQ 430, 433 (CCPA 1977).” (emphasis added by the Examiner) see MPEP2112.01.

10. Claims 4 to 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over each of Japanese Patent document No. 4-163505 (Japan ‘505), Japanese Patent document No. 7-86036 (Japan ‘036), Japanese Patent document No. 7-86035 (Japan ‘035) each in view of Callister as applied to claims 1 to 3 and 9 above, and further in view of Westwood (US Patent No. 6,224,719, cited on the PTO form 892 attached to this Office action).

Each of Japanese Patent document Nos. 4-163505; 7-86036; 7-86035 and Callister teach and are applied as set forth above.

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Westwood teaches the magnetic head structure recited in each of these claims (column 1, lines 33 to 43) and the use of Fe-Al-N-O thin films in the same magnetic head (column 3, lines 33 to 47).

The claims and the combination of Japanese Patent document Nos. 4-163505; 7-86036; or 7-86035 and Callister differ in that this cited combination of prior art is silent with respect to the magnetic head structure recited in claims 4 to 6 and 10.

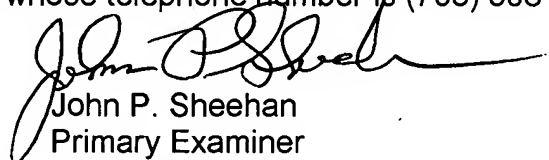
However one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the use of the Fe-M-N-O thin films disclosed by each of the Japanese documents in the instantly claimed magnetic head structure is clearly taught by Westwood.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (703) 308-3861. The examiner can normally be reached on T-F (6:30-5:00) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (703) 308-1146. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

  
John P. Sheehan  
Primary Examiner  
Art Unit 1742

jps